

American Society for Testing Materials BULLETIN

I S S U E D



B I M O N T H L Y

A Democracy

IF THERE ever was a democratic organization in the best sense of the term, our Society is one. In theory at least, and actually I believe, our committees are made up of those who have common ends approached from different standpoints. Our committee meetings are in principle those of the round table where, while you have nominal chairmen, there is no head nor foot but all sit down at the table with equality.

"What is more, our Society has wide-open doors and if any consumer, or group of consumers, has an interest in the standardization of materials for engineering, he finds the spirit of our Society welcoming him as a member, and the same is true with regard to the producers."

*Excerpt from the Presidential Address of
G. W. Thompson, 1929 Annual Meeting*

July, 1929

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American Society for Testing Materials



BULLETIN

ENGINEERS' CLUB BUILDING

1315 SPRUCE STREET

PHILADELPHIA, PA.

NUMBER 39

JULY 31, 1929

Thirty-second Annual Meeting

A GAIN in its meeting held at Atlantic City, June 24-28—its thirty-second annual meeting—has the Society held a meeting exceeding previous ones both in attendance and activity. It is difficult to convey adequately to those not present at the meeting a true conception of the annual meeting as it took place. The fifteen technical sessions, replete with interesting reports and papers, together with the many meetings of committees, sustained the interest of the many members in attendance throughout the entire week. Some idea of the magnitude of the program, of course, may be obtained from the program forwarded to the members in advance of the meeting, with upwards of 100 items. A detailed account of the meeting, covering the presentation of papers and giving the actions taken on recommendations submitted by committees in their annual reports, is set forth in the Summary of Proceedings accompanying this BULLETIN, which Summary represents the Minutes of the meeting. The attendance was 934, the highest previous attendance having been 905 in 1926.

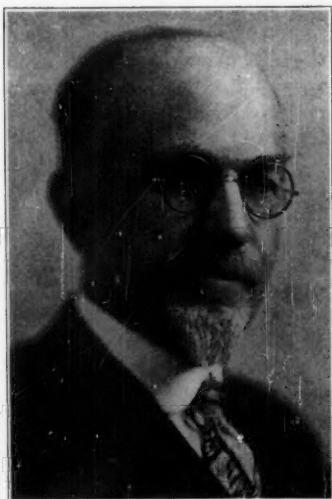
Of outstanding interest on the program were the two Symposiums, one on the Physical Properties of Cast Iron, which represented the collection of a large amount of interesting data which should be of considerable reference value to engineers, the second a Symposium on Mineral Aggregates, which served to assemble a wide variety of valuable information designed to stimulate discussion in respect to those properties of mineral aggregates still requiring research. Two sessions of the meeting were devoted to this latter Symposium.

Two sessions were devoted to non-ferrous metals, the first

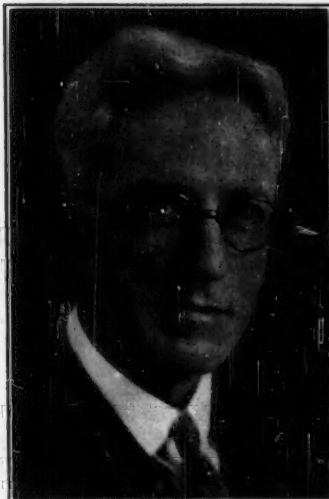
featuring aluminum alloys and die castings, and the second covering metallography, X-ray studies of non-ferrous metals, and results of tests on bearing bronzes and on non-ferrous sheet metals.

The papers and reports on cement and concrete aroused the usual interest in these subjects and comprised the closing session of the meeting. Included in these was a paper not on the final program, a paper by D. A. Abrams on "Effect of Admixtures in Concrete" which is now being reprinted for distribution.

New Officers



PRESIDENT T. D. LYNCH



VICE-PRESIDENT F. O. CLEMENTS

interesting session held on Wednesday evening.

Presidential Address

The President, G. W. Thompson, was introduced by the presiding officer, Past-President W. H. Fulweiler. The President's address dealt with standardization and good will. After analyzing the functions of standard specifications and emphasizing their value in the case of engineering materials used in quantity for specific purposes, he raised the question whether the producer who builds up an asset of good will

The fifteen sessions included five pairs of simultaneous or concurrent sessions. The first session, a general opening session, was held on Tuesday afternoon, June 25, followed immediately by two simultaneous technical sessions. The closing session was held on Friday evening, June 28. Except for Tuesday, the afternoons were kept open for recreation and committee meetings and for the Edgar Marburg Lecture, which was held on Wednesday afternoon. The Presidential Address, together with the report of the Executive Committee, comprised the brief but

through the excellence of his product will lose by the establishment of a standard specification for that product. His answer to this question was that the competent and conscientious producer can gain far greater good will through his tested performance when purchases are made under a recognized standard than is possible when there is no standard or test and when price alone governs.

In closing Doctor Thompson commented as follows:

Our Society occupies an impregnable position, impregnable as long as we perform our functions rationally, justly, and with a continuous process of development. Our object is to build as far as we can on sound foundations, going only as far and as fast as we feel that the circumstances justify. If our Society would live up to its great purpose none of its members and none of its committees must stand in the way of general progress along the lines of proper development. I trust that our future will far exceed in brilliance our past in the service which we are rendering to industry, to our country, and to the world at large.

Announcement of Election of Officers

The announcement on the election of officers was made at the general opening session on Tuesday afternoon. A canvass of the ballots showed that 1108 legal ballots had been cast and, as mentioned elsewhere in this BULLETIN, the officers were declared elected.

The newly-elected President, Mr. T. D. Lynch, after being presented to the meeting, expressed his appreciation of the honor of his election to the Presidency. In doing so he asked for the cooperation of each individual member, both in committee work and in personal activities in order that the work of the Society might successfully continue.

The newly-elected Vice-President, F. O. Clements, after being presented to the meeting, thanked the members for the honor bestowed upon him, stating that he appreciated that the office was one of responsibility and that he would do all in his power to live up to these responsibilities.

Edgar Marburg Lecture

The fourth Edgar Marburg Lecture was held on Wednesday afternoon. The lecturer, Dr. Saul Dushman, Assistant Director of the Research Laboratories of the General Electric Co., spoke on the nature of cohesive forces in solids. The lecturer very appropriately brought out the close relationship existing between the work of the physicist and the engineer, discussing the views of present-day physics on the orbital arrangement of particles to form atoms and the relation of the revolving particles of adjacent atoms and how this relation establishes the cohesion of the material. Ductility and malleability were observed to be intimately dependent upon the type of lattice structure.

Award of Charles B. Dudley Medal

Following the Edgar Marburg Lecture, the third award of the Charles B. Dudley Medal was made to J. J. Kanter and L. W. Spring for their paper on "Long-Time or Flow Tests of Carbon Steels at Various Temperatures With Particular Reference to Stress Below the Proportional Limit," presented at the 1928 annual meeting. Mr. W. H. Bassett, the chairman of the Committee on Award introduced the recipients of the medal and the award was then made by the President.

Action on Proposed Standards

Forty-one committees of the Society presented reports. Most of these recommended actions on standards and tentative standards. As a result of the action of the Society on these recommendations 20 new tentative standards were accepted and 32 existing tentative standards were advanced

to standard, 19 existing standards were revised and 2 standards and 5 tentative standards were withdrawn. As a result of the actions taken, the Book of Standards, with the 1928 and 1929 Supplements, will now contain 390 standard specifications, methods of test, definitions, etc. In addition, the Society will have 173 tentative standards.

Entertainment Features

The several entertainment features were arranged by the Entertainment Committee, under the chairmanship of G. H. Clamer. The annual dance and smoker, held on Wednesday evening after the presentation of the Presidential Address, was especially well attended.

Committee D-2 on Petroleum Products and Lubricants, as in previous years, held an informal dinner. Dr. P. H. Conradson, for many years Vice-Chairman of Committee D-2, was the guest of honor.

The golf tournament continued to be a very popular part of the entertainment features with a total of 39 entries. It was held on Friday afternoon on the course of the Seaview Golf Club. The A.S.T.M. championship golf cup for low score was won for the second consecutive year by H. G. Farmer. The tennis tournament was also held on Friday afternoon at the Seaview Golf Club, the A.S.T.M. championship tennis cup being won for the second consecutive year by F. S. Crane. Other prize winners in golf and tennis were: J. G. Bragg, W. C. Hammond, J. B. Davis, E. D. Boyer, H. F. Clemmer, G. E. Warren, P. H. Cathcart, G. F. Schlesinger and G. C. Wilsnack.

Amendments of By-Laws Referred to Letter Ballot

At the recent annual meeting, on the recommendation of the Executive Committee, there were referred to letter ballot vote of the Society amendments of Article II, Sections 1, 2 and 4, Article IV, Section 4, and Article VI, Section 5, of the By-laws.

The amendments of Article II on Officers and Their Election contemplate the election of 5 members of the Executive Committee each year instead of 4, thus increasing the number on the Executive Committee to 14 officers, together with the last three past-presidents. If these amendments are adopted, it is proposed to elect 5 new members of the Executive Committee in 1930 and the new By-laws will become completely effective with the election of 5 members in 1931.

The amendment of Article IV covering Duties of Officers contemplates requiring 7 members of the Executive Committee to constitute a quorum rather than 5 members.

The amendments of Article VI on the Procedure Governing the Adoption of Standards, would make it possible for standing committees to submit new tentative standards, upon which agreement had been reached, to the Executive Committee in the interval between annual meetings. Tentative standards so submitted would be reviewed by a new Committee on Standards and if that committee is satisfied that the standards represent a consensus of opinion in the standing committee and have been developed according to the regulations governing the adoption of standards, the tentative standards may be accepted for publication.

The letter ballot on the proposed amendments has been made a part of the general letter ballot on the adoption of standards and is enclosed with this BULLETIN and will be canvassed September 3, 1929.

New Members of Executive Committee



G. E. WARREN

H. E. SMITH

C. R. HOOK

G. B. HAVEN

New Officers

The recent election of officers, as announced at the annual meeting, resulted in the unanimous election of Mr. T. D. Lynch as President (1929-1930), Mr. F. O. Clements as Vice-President (1929-1931) and the following as members of the Executive Committee (1929-1931): Messrs. G. B. Haven, C. R. Hook, H. E. Smith and G. E. Warren.

President

T. D. Lynch, the new President, is Consulting Metallurgical Engineer of the Westinghouse Electric and Manufacturing Co. He was graduated from West Virginia University, Morgantown, W. Va., in 1891 with the degree of Civil Engineer. From 1891 to 1897 he was connected with the contracting and inspection engineering firm of G. W. G. Ferris and Co., being in charge of the Chicago office the last two years. From 1897 to 1899, covering the period of the Spanish War, he was connected with the U. S. Navy, Bureau of Steam Engineering; and since 1899 he has been with the Westinghouse Electric and Manufacturing Co.

Vice-President

F. O. Clements, the newly-elected Vice-President, is Technical Director of the Research Laboratories of the General Motors Corp. He was graduated from Otterbein College, Waterville, Ohio, in 1896. He received a master's degree from Otterbein College in 1898, and a master of science degree from Ohio State University, Columbus, Ohio, in 1899. From 1899 to 1903 he was connected with the Pennsylvania Railroad as an assistant chemist, and from 1903 to 1905 with the Union Pacific Railroad as principal assistant chemist. From 1905 to 1917 he was chief chemist and engineer of tests of the National Cash Register Co., from 1917 to 1920 director of research of the Dayton Metal Products Co., and since 1920 he has been Technical Director of the Research Laboratory of the General Motors Corp.

Members of Executive Committee

G. B. Haven is Professor of Advanced Machine Design, In Charge of Textile Research, Massachusetts Institute of Technology. He was graduated from the Institute in 1894. From 1899 to 1910 he was associated with the late Prof. Peter Schwamb in the Department of Machine Design and

Textile Engineering of the Institute, and since 1910 has been in charge of machine design and textile engineering.

C. R. Hook is Vice-President and General Manager of the American Rolling Mill Co., Middletown, Ohio. In 1898 he became connected with the Cincinnati Rolling Mill and Tin Plate Co. He next associated himself with the American Rolling Mill Co. and since 1920 he has been Vice-President and General Manager.

H. E. Smith is Engineer of Materials of the New York Central Lines, in charge of specifications and special investigations of material. After his graduation from the Massachusetts Institute of Technology he was made assistant chemist of the Chicago, Milwaukee, and St. Paul Railroad and three years later chief chemist. In 1902 he entered the service of the Lake Shore & Michigan Southern Railway as chemist and engineer of tests and later was made engineer of tests of the New York Central Railroad. He has been Engineer of Materials of the New York Central Lines since 1926.

G. E. Warren is Assistant General Manager of the Portland Cement Assn., Chicago, Ill. He was graduated from the University of Illinois and in 1917 received the degree of Civil Engineer. He was engaged in engineering and contracting from 1912 to 1915 and has held his present position for the past nine years. Mr. Warren is a member of the American Society of Civil Engineers, Western Society of Engineers, American Concrete Institute, Chicago Engineers Club, Society for the Promotion of Engineering Education, and Treasurer and Director of the American Concrete Pipe Assn.

Committee on 1930 Annual Meeting

The Executive Committee has decided that it would be desirable to hold the annual meeting of the Society in 1930 elsewhere than at Atlantic City, if proper arrangements can be made. The suitability of various other meeting places is accordingly being considered by a committee consisting of the following members of the Executive Committee: K. G. Mackenzie (chairman), G. B. Haven, H. E. Smith and G. E. Warren.

Consideration is being given to the Middle West as a meeting place for 1930.

AMERICAN SOCIETY FOR TESTING MATERIALS BULLETIN

Issued Bi-Monthly

Engineers' Club Building, 1315 Spruce St., Philadelphia, Pa.

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Number 39

July 31, 1929

A.S.T.M. Membership—What It Means

II. Knowledge of Materials

IN a previous article, opportunity for personal association and exchange of information and ideas was discussed by the Secretary as one of the fundamental reasons for existence of a technical society and of first magnitude as an asset of membership in the A.S.T.M. But there are other, and perhaps more tangible, returns to the company or individual that holds an A.S.T.M. membership. One of these is the ability through such membership to keep informed and up-to-date on the properties and tests of engineering materials.

We have first the investigations by the standing and research committees of the Society, of which the following are typical: Resistance to corrosion of ferrous and non-ferrous metals, including tests of metallic-coated products; properties of die-casting alloys; effect of temperature on the properties of metals; fatigue properties of metals; yield point of structural steel; magnetic properties of steel; effect of phosphorus and sulfur in steel; studies of cast-iron pipe; testing of cement; various properties of concrete; paints, varnishes, shellacs and naval stores; tests of rubber products; and many investigations dealing with the testing of petroleum products, road materials, coal and coke, timber, slate, building stone, and so on.

Then there is the fund of information contained in the technical papers and discussions presented at annual meetings of the Society. These are contributed by leading investigators in scientific and technologic fields, including many important contributions from industrial researches. The recent annual meeting included such outstanding topics as properties of mineral aggregates and engineering properties of cast iron, each treated in an extensive symposium; fatigue and corrosion-fatigue studies of materials; papers on non-ferrous sheet metals, bearing bronzes, electrical heating wires, significance of proportional limit, tests of concrete reinforcement bars, compression tests for cement, elastic properties of concrete and admixtures in concrete.

The members receive these reports and papers first in the form of "preprints" issued prior to the annual meeting, and then collected with discussions into two bound volumes of

Proceedings aggregating approximately 2000 pages. Under a modified publication policy, copies of reports of investigations and other committee activities will be made available during the year as they are completed and reported by the committees.

Opportunity to keep abreast of the constantly expanding knowledge of materials is unquestionably a second important asset of membership in our Society.

A Message from the President

The properties of materials are of interest to many—to the manufacturer who is responsible for converting materials from their original more or less crude form into usable form; to the designing engineer, who has certain requirements to meet, either physical, electrical or chemical, and who must know what materials can be safely used; and to the fabricator, who wishes to know how a material will respond to his fabricating process. Materials testing provides the desired information and the data on which standard specifications for materials may be based.

All parties are interested in the preparation of standard specifications: the manufacturer, the designing engineer, the fabricator, the consumer and the testing engineer who must supply the necessary data. It is on this basis that our standing committees are organized, to consist of the representatives of all parties concerned and it is because of this type of organization that it has been possible for these competent committees to carry on their noteworthy work, first in securing essential information on the properties of materials and second in the preparation of the specifications.

In order to assure that our standardization work shall proceed along complete and rational lines, and in order to provide a means for reviewing and receiving new tentative standards in the intervals between annual meetings, a new Committee E-10 on Standards is being organized. The necessary changes in our regulations governing the adoption of standards are now out to letter ballot of the members. It is expected that these changes, whereby new tentative standards may be offered for publication as soon as they have been developed and approved in the standing committee responsible, will serve as an incentive to our standing committees to complete their specifications promptly, at any time of the year when the necessary data become available, since this new plan will enable them to make the work immediately available to the membership.

I would accordingly ask that every member of a standing committee cooperate in carrying on specification work actively to completion. In this way he can be of the greatest service to industry and to the Society. The officers and Administrative Committees of the Society stand ready to carry out their part in the program in every way possible. By joint efforts only can we hope to do the work that is expected of us.

J. D. Lynch

Discussion Will Still Be Received

Written discussion of the papers and reports presented at the recent annual meeting will be received by the Committee on Papers and Publications until September 3. Discussions received later may or may not be included in the Proceedings, although special consideration will be given to discussions of papers not preprinted for the annual meeting but distributed in reprint form after the meeting.

Matters Referred to Letter Ballot

By action of the annual meeting, the following 32 tentative standards and revisions of 19 existing standards were referred to letter ballot vote of the membership of the Society for adoption as standard. Detailed information concerning all matters referred to letter ballot is given in the preprints of the committee reports issued to the members in advance of the meeting and in the Summary of the Proceedings. Amendments of the By-laws, referred to elsewhere in this BULLETIN and given in detail in the Summary of the Proceedings, were also referred to letter ballot of the Society:

AMENDMENTS TO BY-LAWS

- Article II. *Officers and Their Election:* Sections 1, 2 and 4.
 Article IV. *Duties of Officers:* Section 1.
 Article VI. *Procedure Governing the Adoption of Standards:* Section 1.

REVISIONS OF EXISTING STANDARDS

Standard Specifications for:

- Structural Steel for Bridges (A 7-24), recommended by Committee A-1.
- Structural Nickel Steel (A 8-24), recommended by Committee A-1.
- Structural Steel for Buildings (A 9-24), recommended by Committee A-1.
- Structural Silicon Steel (A 94-27), recommended by Committee A-1.
- Carbon-Steel and Alloy-Steel Blooms, Billets, and Slabs for Forgings (A 17-21), recommended by Committee A-1.
- Wrought Solid Carbon-Steel Wheels for Steam Railway Service (A 57-24), recommended by Committee A-1.
- Gray-Iron Castings (A 48-18), recommended by Committee A-3.
- Cast-Iron Soil Pipe and Fittings (A 74-18), recommended by Committee A-3.
- High-Test Gray-Iron Castings (A 88-24), recommended by Committee A-3.
- Free-Cutting Brass Rod for Use in Screw Machines (B 16-18), recommended by Committee B-5.
- Cartridge Brass (D 19-19), recommended by Committee B-5.
- Cartridge Brass Disks (B 20-19), recommended by Committee B-5.
- Naval Brass Rods for Structural Purposes (B 21-27), recommended by Committee B-5.
- Seamless Admiralty Condenser Tubes and Ferrule Stock (B 44-24), recommended by Committee B-5.
- Asphalt Roll-Roofing and Asphalt Shingles Surfaced with Mineral Granules (D 225-27), recommended by Committee D-8.

Standard Methods of:

- Routine Analysis of Dry Red Lead (D 49-28), recommended by Committee D-1.
- Routine Analysis of Titanium Pigments (D 186-27), recommended by Committee D-1.
- Laboratory Sampling and Analysis of Coal and Coke (D 271-27), recommended by Committee D-5.
- Testing Molded Insulating Materials (D 48-27), recommended by Committee D-9.

TENTATIVE STANDARDS TO BE ADOPTED AS STANDARD

Tentative Specifications for:

- Castings for Valves, Flanges, and Fittings for High-Temperatures (A 95-28 T), revised as recommended by Committee A-1.
- Lap-Welded and Seamless Steel Pipe for High-Temperature Service (A 106-28 T), revised as recommended by Committee A-1.
- Structural Steel for Locomotives and Cars (A 113-28 T), recommended by Committee A-1, to replace the Standard Specifications for Structural Steel for Locomotives (A 10-24) and for Structural Steel for Cars (A 11-24).
- The Arbitration Test Bar and Tension Test Specimen for Cast Iron (A 124-28 T), recommended by Committee A-3.
- Bronze Trolley Wire (B 9-27 T), recommended by Committee B-1.
- Rolled Zinc (B 69-27 T), recommended by Committee B-2.
- Silver Solders (B 73-28 T), revised as recommended by Committee B-2.
- Aluminum Ingots for Remelting (B 24-26 T), revised as recommended by Committee B-7.
- Aluminum Sheet (B 25-26 T), revised as recommended by Committee B-7.
- Building Brick (Made from Clay or Shale) (C 62-28 T), recommended by Committee C-3.
- Gypsum Molding Plaster (C 59-26 T), revised as recommended by Committee C-11.
- Gypsum Pottery Plaster (C 60-26 T), revised as recommended by Committee C-11.
- Sand for Sheet Asphalt and Bituminous Concrete Pavements (D 162-23 T), recommended by Committee D-4.
- Broken Stone for Waterbound Macadam Surface Course (D 191-24 T), recommended by Committee D-4.
- Broken Stone for Bituminous Macadam (D 192-24 T), recommended by Committee D-4.

New Tentative Standards

The twenty new tentative standards, consisting of ten specifications, nine methods of test and one list of definitions accepted for publication, are listed below, together with the serial designations that have been assigned to them:

Metals:

- Spec. for Heat-Treated Carbon-Steel Helical Springs (A 125-29 T).
- Specifications for Gray-Iron Castings for Valves, Flanges and Pipe Fittings (A 126-29 T).
- Definitions of Magnetic Terms, with Units and Symbols Relating to Magnetic Testing (A 127-29 T).
- Accelerated Life Test for Metallic Materials for Electrical Heating (B 76-29 T).

Paints and Oils:

- Specifications for Soluble Nitrocellulose (D 301-29 T).
- Specifications for Ethyl Acetate (D 302-29 T).
- Specifications for Butyl Acetate (D 303-29 T).
- Specifications for Butanol (D 304-29 T).
- Method of Routine Determination of Acetone Extract in Dry Lampblack and Dry Bone Black (D 305-29 T).
- Method of Test for Polishing Lubricant in Aluminum Powder for Paints (Aluminum Bronze Powder) (D 306-29 T).
- Method of Analysis for the Color Characteristics of Paints in Terms of Fundamental Physical Units (D 307-29 T).
- Method of Test for the Determination of Expressible Oil and Moisture in Paraffin Waxes (D 308-29 T).

Road Materials:

- Spec. for Gravel for Bituminous Concrete Base (D 309-29 T).

Coal and Coke:

- Method of Test for Size of Anthracite (D 310-29 T).
- Method of Test for Sieve Analysis of Crushed Bituminous Coal (D 311-29 T).

Waterproofing and Roofing Materials:

- Specifications for Asphalt for Use in Constructing Built-Up Roof Coverings (D 312-29 T).
- Method of Test for Coarse Particles in Bituminous Materials by Means of Elutriation (D 313-29 T).

Rubber Products:

- Method of Test for Hardness of Soft Rubber (in Slab Form) (D 314-29 T).

Textile Materials:

- Spec. for Asbestos Tape for Electrical Purposes (D 315-29 T).
- Specifications for Chafer Tire Fabrics (D 316-29 T).

These tentative standards will appear in Part I of the Proceedings for this year and in the 1929 Book of A.S.T.M. Tentative Standards.

- Broken Stone for Bituminous Concrete Surface (D 194-24 T), recommended by Committee D-4.
- Tolerances and Test Methods for Light and Medium Cotton Fabrics (D 274-27 T), recommended by Committee D-13.
- Specifications and Tolerances for 23/5/3 Carded American Tire Cord (D 298-28 T), recommended by Committee D-13.
- Tolerances and Test Methods for Asbestos Yarns (D 299-28 T), recommended by Committee D-13.
- Non-Ferrous Insect Screen Cloth (B 50-27 T), recommended by Committee D-14.

Tentative Methods of:

- Test for Resistivity of Metallic Materials for Electrical Heating (B 63-26 T), revised as recommended by Committee B-4.
- Chemical Analysis of Limestone, Quicklime and Hydrated Lime (C 25-27 T), recommended by Committee C-7.
- Test for Coarse Particles in Dry Pigments and Coarse Particles and Skins in Mixtures of Pigments and Vehicles (D 185-28 T), recommended by Committee D-1.
- Routine Analysis of White Linseed Oil Paints (D 215-28 T), revised as recommended by Committee D-1.
- Routine Analysis of Dry Cuprous Oxide (D 283-28 T), recommended by Committee D-1.
- Routine Analysis of Dry Mercuric Oxide (D 284-28 T), recommended by Committee D-1.
- Test for the Determination of Moisture Equivalent of Subgrade Soils (D 220-25 T), recommended by Committee D-4.
- Test for Cubic Foot Weight of Crushed Bituminous Coal (D 291-28 T), revised as recommended by Committee D-5.
- Test for Cubic Foot Weight of Coke (D 292-28 T), revised as recommended by Committee D-5.
- Test for Sieve Analysis of Coke (D 293-28 T), revised as recommended by Committee D-5.
- Tumbler Test for Coke (D 294-28 T), revised as recommended by Committee D-5.

Recommended Practice for:

- Radiographic Testing of Metal Castings (E 15-26 T), recommended by Committee E-4.

Pacific Coast Organization Progressing

Organization of three district committees on the Pacific Coast, for the broad purpose of promoting the usefulness and extending the influence of the Society in the Far West and of providing a means of contact between the Executive Committee and the Society membership in these several districts, has been completed. The personnel of these committees is herewith announced.

Southern California District Committee:

- F. W. Hinrichs, Jr. (*chairman*), Professor of Mechanics, California Institute of Technology, Pasadena.
 S. C. Simons (*secretary*), Gladding-McBean and Co., Los Angeles.
 G. A. Beckett, General Manager, Riverside Cement Co., Los Angeles.
 E. F. Bent, Executive Vice-President, American Concrete Pipe Co., Los Angeles.
 H. L. Doolittle, Chief Designing Engineer, Southern California Edison Co., Los Angeles.
 T. A. Fitch, Testing Engineer, Engineering Department, City of Los Angeles.
 R. E. Haylett, Technical Assistant, Union Oil Co., Wilmington.
 P. E. Jeffers, Structural Engineer, Los Angeles.
 N. W. Kelch, Secretary-Manager, Clay Products Institute of California, Los Angeles.
 R. P. Miller, Vice-President, Consolidated Steel Corp., Los Angeles.
 R. J. Wig, Los Angeles.

Northern California District Committee:

- A. A. Hanks (*chairman*), President, Abbot A. Hanks, Inc., Engineers and Chemists, San Francisco.
 T. P. Dresser, Jr. (*secretary*), Chief Engineer, Abbot A. Hanks, Inc., San Francisco.
 R. E. Davis, Professor of Civil Engineering, University of California, Berkeley.
 F. E. Harris, Chief, Bureau of Specifications and Estimates, Pacific Gas and Electric Co., San Francisco.
 R. A. Kinzie, Consulting Engineer, Santa Cruz Portland Cement Co., San Francisco.
 E. L. Lasier, Pacific Coast Manager, John Lucas & Co., Inc., Oakland.
 J. B. Terry, Chief Chemist, Standard Oil Co. of California, Richmond.
 C. E. Williams, Columbia Steel Corporation, San Francisco.
 Dennistoun Wood, Engineer of Tests, Southern Pacific Co., San Francisco.

Seattle District Committee:

- I. L. Collier (*chairman*), Assistant Professor of Civil Engineering, University of Washington, Seattle.
 L. L. Warden (*secretary*), Chief Chemist, Falkenburg & Co., Seattle.
 J. C. Beneker, Metallurgist, Pacific Coast Steel Co., Seattle.
 M. J. Falkenburg, President, Falkenburg and Co., Seattle.
 C. J. Hogue, in charge Trade Extension and Field Service, West Coast Lumbermen's Association, Seattle.
 S. E. Hutton, Research Engineer, Pacific Coast Co., Seattle.
 H. C. Jarvis, Mechanical Engineer, Pacific Car and Foundry Co., Renton.
 C. N. Reitze, Vice-President and General Manager, Superior Portland Cement, Inc., Seattle.

Consideration is being given to the formation of a similar committee in Portland, Ore. Each of the three committees has held one or more meetings for the consideration of means of most effectively organizing for Society work in its locality.

Correspondent Members of Committee on Papers

These three committees have suggested the names of several members in their districts from which the Executive Committee will select three "correspondent" members to serve on Committee E-6 on Papers and Publications. The purpose primarily is to stimulate the presentation of technical papers and discussions from Pacific Coast member, although these correspondent members will be in touch with all the activities of the Papers Committee. These appointments will establish a very helpful contact with the western membership in the planning of technical programs, and afford a channel through which should flow many valuable contributions to the Society's Proceedings.

Suggestions from District Committees

The Southern California District Committee has suggested that the Society give consideration to the following technical subjects: (1) jointing compounds for sewer pipe and compounds for use in setting vitrified clay liners for sewer pipe; (2) mortars for unit masonry; (3) methods of testing chimney and vent pipe of various materials; (4) specifications and tests for roofing tile. The first of these has been referred to Committee C-4 on Clay and Cement-Concrete Pipe for recommendation to the Executive Committee; the remaining three are being given further consideration and study.

The Northern California District Committee has suggested the establishment of a Pacific Coast source of supply for Society publications, which is also receiving the consideration of the Executive Committee.

Marburg Lecture and Other Papers Preprinted

Several items on the program for the 1929 annual meeting were not preprinted in advance of the meeting nor distributed at the meeting. These have been put in type as follows: Edgar Marburg Lecture, by Saul Dushman, on "The Nature of Cohesive Forces in Solids"; paper by D. A. Abrams on "Tests of Powdered Admixtures in Concrete"; paper by L. H. Fry on "The Effect of Reduction from Ingot to Forging in Steel Forgings"; paper by T. R. Truax and C. A. Harrison on "A New Test for Measuring the Fire Resistance of Wood"; Report of Research Committee on Effect of Tin and Arsenic on High Speed Tool Steel.

Reprints will be available in about two weeks from date and will be distributed to those who requested preprint copies. The papers and report are open for discussion and discussion by letter will be received by the Committee on Papers and Publications until September 15, the usual limiting date having been extended in the case of these papers that were not preprinted.

Advertising in Index to A.S.T.M. Standards

Announcement was made in the April BULLETIN to the effect that the Executive Committee had decided to add an advertising section to the annual Index to A.S.T.M. Standards and Tentative Standards, the first issue of which was published last fall. The next issue of this publication should appear early in November. Advertising of the following character is contemplated:

1. Advertisements by manufacturers and suppliers of engineering materials and products;
2. Advertisements by manufacturers and suppliers of testing machines, apparatus and equipment; and
3. Professional cards of consulting engineers, metallurgists, chemists, testing engineers and testing laboratories.

In so far as it may be necessary to limit the kind and extent of advertising in the Index, preference will be given to advertisements of materials and products covered by the A.S.T.M. specifications and methods of test.

Members and others interested in this new advertising policy may secure information, including advertising rates, upon application to the Secretary-Treasurer, using the enclosed return card for this purpose.

International Petroleum Exposition

The sixth International Petroleum Exposition and Congress will be held at Tulsa, Okla., October 5-12, 1929, at which it will be possible to visualize the many activities of the petroleum industry. Members of the Society are invited to attend.

Franklin Memorial Museum

There is to be erected in Philadelphia, under the auspices of The Franklin Institute and the Benjamin Franklin Memorial, Inc., a monumental architectural memorial to Benjamin Franklin with a collection portraying the graphic arts as they were in Franklin's time and showing also their development to the present time—a great scientific and technologic museum similar to the scientific museums of Europe. The Executive Committee has offered the assistance of the Society in advising with the Institute in the portrayal in this museum of the development of the testing of materials. For this purpose the following committee has been formed: Samuel Tobias Wagner, Chairman, Clement E. Chase, G. H. Clamer, W. H. Fulweiler and H. F. Moore. This committee met in consultation with Dr. Howard McClenahan, Secretary of the Institute, during the recent annual meeting, when it was decided that two distinct studies should be undertaken: (1) developments in the materials of engineering and (2) developments in methods and machines for testing. The fundamental purpose of the museum, that is, the portrayal and elucidation of scientific principles, will be kept carefully in mind in planning exhibits of testing machines and apparatus. Charts, photographs, motion picture films, models and, where possible, apparatus itself will be used in setting forth developments in the science of materials testing.

Committee on 1930 Marburg Lecture

The Executive Committee has appointed the committee to select the Edgar Marburg lecturer for 1930. Under the rules governing the Lecture this committee consists of a member of the Executive Committee, a member of Committee E-9 on Correlation of Research and a member of Committee E-6 on Papers and Publications. The personnel is as follows: H. C. Knerr, Consulting Metallurgical Engineer, Philadelphia, Pa., appointed from Committee E-6; F. R. McMillan, Director of Research, Portland Cement Association, Chicago, Ill., appointed from Committee E-9; G. W. Thompson, Chief Chemist, National Lead Co., Brooklyn, N. Y., appointed from the Executive Committee. Doctor Thompson will serve as chairman of the committee.

Society Appointments

Announcement is made of the following appointments:

Mr. Cloyd M. Chapman, Consulting Engineer, New York City, as the Society's representative on the Mechanical Standards Advisory Council, with the Secretary-Treasurer as alternate.

Mr. Jerome Strauss, Chief Research Engineer, Vanadium Corporation of America, Bridgeville, Pa., as a member of the Iron Alloys Research Committee, recently organized under the auspices of the Engineering Foundation and in cooperation with the American Institute of Mining and Metallurgical Engineers.

Mr. J. J. Shuman, Inspecting Engineer, Jones and Laughlin Steel Corporation, Pittsburgh, Pa., as a member of the Sectional Committee on Stock Sizes, Shapes and Lengths for Hot and Cold Finished Bars, with the Assistant Secretary of the Society as alternate.

Dr. G. K. Burgess, Director, U. S. Bureau of Standards and Past-President of the Society, Mr. C. E. Skinner, Assistant Director of Engineering, Westinghouse Electric and Mfg. Co., East Pittsburgh, Pa., and Dr. Arthur N. Talbot, Professor Emeritus, University of Illinois, and Honorary Member and Past-President of the Society, as the Society's official delegates to the World Engineering Congress in Tokyo, to be held in October of this year.

Appointments to Committee E-6 on Papers

The Executive Committee has appointed the following three members of the Society to serve on the Committee on Papers and Publications for the ensuing term of three years: Arthur W. Carpenter, Manager of Testing Laboratories, The B. F. Goodrich Co., Akron, Ohio; R. L. Hallett, Chemist, National Lead Co., Brooklyn, N. Y.; and Dean Harvey, Materials Engineer, Material and Process Engineering Dept., Westinghouse Electric and Mfg. Co., East Pittsburgh, Pa.

Mr. Carpenter is Secretary of Committee D-11 on Rubber Products, Mr. Hallett, Secretary of Committee D-1 on Preservative Coatings for Structural Materials and Mr. Harvey, Chairman of Committee B-4 on High-Temperature and Electrical-Resistance Alloys and Vice-Chairman of Committee D-9 on Electrical Insulating Materials. Their experience and contacts in these several fields will be particularly valuable to the Papers Committee. They succeed on the committee, Messrs. D. K. Boyd, F. M. Farmer and F. P. Veitch.

New Member Appointed to Committee E-9

Mr. H. C. Mougey, Assistant Technical Director and Chief Chemist, General Motors Corporation Research Laboratories, Detroit, Mich., has been appointed a member of Committee E-9 on Correlation of Research for the term of five years, succeeding Mr. G. H. Clamer. Mr. Mougey brings to this important administrative committee valuable knowledge and experience in research in the petroleum and automotive fields.

Forthcoming Society Publications

Year Book.—The 1929 Year Book, about 325 pages, containing the charter and By-laws, the list of members, geographical distribution of members, personnel of standing committees and list of standards and tentative standards, is now in course of preparation. This volume will be ready for distribution to all members about September 15.

1929 Supplement to the Book of A.S.T.M. Standards.—The second supplement to the 1927 Book of A.S.T.M. Standards is being issued this year, a pamphlet comprised of 225 pages. It will contain 32 Tentative Standards advanced to Standard and 19 replacements of existing Standards. It should be ready for distribution to members in good standing about September 15.

Book of A.S.T.M. Tentative Standards.—A volume is again being issued containing all of the Tentative Standards of the Society (173) in their latest revised form. Although the current Proceedings contain the new and revised tentative standards, many members find it a convenience to have a compilation of all tentative standards bound in one cover. The value and popularity of the volume is shown by the ever-increasing demand. Each new member, as he qualifies, is furnished with a copy of this publication. The 1929 Book should be available about October 15.

Combined Index of Standards.—A combined index of all Standards and Tentative Standards of the Society will again be issued complete with references to the publications in which the Standards appear. This index should be available early in November and will be distributed to all members and to others on request.

Proceedings.—The publication of the Proceedings of the recent annual meeting containing committee reports, new and revised standards, technical papers and discussions, will be taken in hand as promptly as possible. It is expected that distribution to members in good standing will be completed about December 15. The size of Parts I and II of the Proceedings will aggregate approximately 2000 pages.

A.S.A. Board of Directors Organized

The Board of Directors of the American Standards Association provided for in the Association's new Constitution to control general administrative and financial affairs of the Association has been organized, consisting of nine members designated for terms of three years by member bodies of the Association, in addition to the President, Vice-President and Junior Past-President of the Association.

The Society was one of nine member bodies asked to appoint a member of the first Board and designated Mr. Quincy Bent, Vice-President of the Bethlehem Steel Co., in Charge of Manufacture, as its representative. He brings to the deliberations of the new Board of Directors a wide experience in the iron and steel industry.

The complete personnel of the Board of Directors follows:

- QUINCY BENT, Vice-President, Bethlehem Steel Co., representing the American Society for Testing Materials.
- G. K. BURGESS, Director, Bureau of Standards, representing the Department of Commerce.
- CLOYD M. CHAPMAN, Consulting Engineer, Vice-President, American Standards Association.
- CLARENCE L. COLLENS, President, Reliance Electric and Engineering Co., representing the National Electrical Manufacturers Association.
- HOWARD COONLEY, President, Walworth Manufacturing Co., representing the American Society of Mechanical Engineers.
- L. A. DOWNS, President, Illinois Central Railroad, representing the American Railway Association.
- BANCROFT GHERARDI, Vice-President and Chief Engineer, American Telephone and Telegraph Co., representing the American Institute of Electrical Engineers.
- F. E. MOSKOVICS, President, Improved Products Corporation, representing the Society of Automotive Engineers.
- W. J. SERRILL, Chairman of the Research Committee, United Gas Improvement Co., President, American Standards Association.
- C. E. SKINNER, Assistant Director of Engineering, Westinghouse Electric and Manufacturing Co., Past-President, American Standards Association.
- M. S. SLOAN, President, New York Edison Co., representing Electric Light and Power Group.
- R. J. SULLIVAN, Vice-President, Travelers Indemnity Co., representing A.S.A. Safety Group.

Cement Reference Laboratory Established

The Cement Reference Laboratory at the U. S. Bureau of Standards, formed as a Bureau fellowship by Committee C-1 on Cement and functioning under the joint auspices of the Bureau of Standards and that committee, has now been formally established.

The purposes of the Laboratory are set forth fully in the current report of Committee C-1. Briefly, the Laboratory will give instruction on the established A.S.T.M. standard methods of testing portland cement. It will instruct in the proper methods for maintaining equipment and will calibrate testing equipment submitted to it. It will, upon request, report upon the adequacy and accuracy of apparatus in cement testing laboratories and will have authority to issue suitable certificates covering apparatus.

The Laboratory will be located in the Industrial Building of the Bureau of Standards. The chief of the Laboratory's staff is Mr. John R. Dwyer, Associate Engineer Physicist of the Bureau. Two assistants have so far been appointed, namely, Messrs. L. A. Wagner and C. B. Kohli. The work will be carried on both in Washington and in the field.

The laboratory is supported jointly by annual contributions of \$12,500 each from the portland cement industry, administered through Committee C-1, and from the United States Government.

Clarifying Standardization Relationships

The following statement of the cooperative relations of the American Standards Association and the Division of Trade Standards of the U. S. Bureau of Standards has been formally approved by the Association and by the Bureau:

1. The American Standards Association is the agency through which standardization by trade associations, technical societies, and governmental agencies is advancing in the United States on a broadly national scale. The Association is maintained by a group of national organizations, industrial, technical, and governmental (at present 40 in number).

2. The Association imparts a definite status to standards which are prepared by industry in accordance with the Association's procedure, through declaring them American Standards, after a consensus has been reached among the various groups substantially concerned—producers, consumers, distributors, and general interests.

3. The National Bureau of Standards, through its Division of Trade Standards, is acting as a centralizing agency for industrial and commercial groups requesting its cooperation in the adjustment, application, and promotion of standards that will facilitate production and marketing of the commodities which concern the requesting group. After proper acceptance of such standards by the interests immediately concerned, the Bureau publishes them as the "Commercial Standards" of those interests. Primarily, the effort of the Bureau is to serve those groups which have no satisfactory standardization facilities.

4. Since "Commercial Standards" are obviously of interest to groups immediately concerned with the manufacturing and marketing of specific commodities, such standards are not considered to have the same status as is imparted to standards approved as American Standards by the A.S.A., though it is hoped that some Commercial Standards will eventually receive such approval. Commercial standards are temporary standards.

5. In the advancement of Commercial Standards to the status of American Standards, the Bureau of Standards may serve as the sponsor for a given project if it shall appear that such sponsorship is desired by the proponent group and if such assignment is consistent with other sponsorships and with the regular practice and procedure of the A.S.A.

6. With reference to changes or revisions of a standard for which the Bureau acts as sponsor, the Bureau will, under the A.S.A. procedure, in the same way as other sponsor organizations, assume responsibility for presenting the proposed changes to the proponent group for consideration and action.

7. The foregoing does not apply to Simplified Practice Recommendations since the Bureau endeavors to keep the elimination of unnecessary varieties a separate function.

This statement is timely in view of the greatly increased interest in industrial standards on the part of business executives, and is of particular interest to our Society as a member body of the American Standards Association having also a number of direct contacts with the commercial standards work of the Bureau of Standards.

Use of A.S.T.M. Data in Advertising

In view of several instances of misuse in advertising of data published by the Society, that recently have come to the attention of the Executive Committee, that committee has adopted the following statement of policy:

Data or statements quoted from Society reports for advertising purposes must be properly acknowledged and must be clearly identified as such and set apart from any interpretations or comments on them that are made by the advertiser. It is preferable that such data or statements shall be quoted in full. When considered necessary to abstract portions of data or statements, such abstracting must be satisfactory to the responsible committee of the Society and be sufficiently complete that it will not state or imply conclusions other than those stated in the official Society reports.

Those who contemplate using A.S.T.M. data in advertising are requested to observe these conditions. The Society staff will review copy for such advertising, upon request.

Cement Committee Holds Important Meeting

Committee C-1 on Cement held three very well attended meetings during the annual meeting of the Society. The Sub-Committee on Strength presented the results obtained to date in a cooperative study of the use of plastic mortars for an acceptance test of cement, which would also indicate the strength which the cement might develop in concrete. The data so far obtained are so promising that the sub-committee will continue the study during the coming year.

The Sub-Committee on Masonry Cements plans to have specifications covering these cements available in the near future.

The Sub-Committee on Apparatus presented for reference to letter ballot of the committee and, if accepted, for presentation to Committee E-10 on Standards for publication as tentative, effective January 1, 1930, tolerances to apply to all the equipment now used in testing cement. These are essential for the proper functioning of the Cement Reference Laboratory which the Society, through Committee C-1, now maintains at the Bureau of Standards.

Revisions in Cement Specifications Proposed

Committee C-1 also approved for submission to letter ballot of the committee and, if approved, for submission to Committee E-10 on Standards, certain tentative revisions in the present standard for portland cement. The series of motions to be submitted to letter ballot include: (1) the changing of the title of the present standard so as to cover "portland cements" instead of "portland cement"; (2) the insertion of two sets of strength requirements in the standard, one for portland cement and the other for high early strength portland cement; (3) the making of the tensile strength requirements of the 1:3 standard mortar for portland cement 200 lb. at three days and 275 lb. at seven days, and for high early strength portland cement 275 lb. at 24 hours and 375 lb. at 72 hours; (4) the making of the 28-day test optional with the purchaser and when so desired the strengths not to be lower than those obtained in the seven day or 72-hour test (for portland cement or high early strength portland cement, respectively); and (5) placing a limit of 2.5 per cent on the sulfuric anhydride in the high early strength portland cement.

New Committee Officers

Elections of officers were held by several of the standing committees in connection with their meetings at the recent annual meeting. New officers elected are as follows:

COMMITTEE A-10 ON IRON-CHROMIUM-NICKEL ALLOYS.

Chairman: Jerome Strauss, Chief Research Engineer, Vanadium Corporation of America, Bridgeville, Pa.

Secretary: N. L. Mochel, Metallurgical Engineer, Westinghouse Electric and Mfg. Co., Philadelphia, Pa.

COMMITTEE B-5 ON COPPER AND COPPER ALLOYS, CAST AND WROUGHT.

Secretary: D. K. Crampton, Metallurgist, Chase Metal Works, Waterbury, Conn.

COMMITTEE C-8 ON REFRACTORIES.

Vice-Chairman: J. S. McDowell, Research Dept. Harbison-Walker Refractories Co., Pittsburgh, Pa.

COMMITTEE D-2 ON PETROLEUM PRODUCTS AND LUBRICANTS.

Honorary Chairman: A. E. Dunstan, Chief Chemist, Anglo-Persian Oil Co., London, England.

COMMITTEE D-4 ON ROAD AND PAVING MATERIALS.

Vice-Chairman: P. J. Freeman, Chief Engineer, Bureau of Tests and Specifications, Department of Public Works, Allegheny County, Pittsburgh, Pa.

COMMITTEE D-13 ON TEXTILE MATERIALS.

Vice-Chairman: W. E. Emley, Chief, Division of Fibrous and Organic Materials, U. S. Bureau of Standards, Washington, D. C.

Specifications for Petroleum Products

Committee D-2 on Petroleum Products and Lubricants has reached a point in its work when the consideration of developing standard specifications for certain petroleum products seems to be warranted. The standardization of the more important of the methods of test of petroleum products has been accomplished and some of the newer tests are gradually being standardized. Many of the test methods have been approved as American Standard. Last year the committee submitted the results of a two-year study of the "Significance of Tests of Petroleum Products," designed to supply the need for authoritative information regarding the applicability of the tests now in common use in this country and the significance of the results obtained with regard to the proper choice of tests and the assignment of proper numerical values to specifications based upon these tests.

The committee is now engaged in the formation of "technical committees," which will "study the relation between test data and service performance of materials and prepare and recommend materials specifications to Committee D-2." While essentially similar to sub-committees of our standing committees, these technical committees will be organized on a somewhat broader basis, more nearly corresponding to the organization of a standing committee itself or of a sectional committee under the procedure of the American Standards Association. Thus it is desired to bring into these technical committees representatives of organizations interested in specifications for petroleum products, especially consumer organizations, and the membership, therefore, will not be confined to members of the committee or of the Society. As in the case of our standing committees, at least half of the membership of these technical committees will consist of consumers and general interests and the chairman will be selected from among that group.

For the present three technical committees are being formed as follows: *A* on Gasoline, *B* on Motor Oils, and *C* on Fuel Oils (including Diesel Fuel). As this article is written, H. C. Mougey, Assistant Technical Director and Chief Chemist, General Motors Corporation Research Laboratories, Detroit, Mich., has accepted the chairmanship of Technical Committee *B* on Motor Oils, and H. C. Dinger, Captain, U. S. Navy, Engineering Experiment Station, Annapolis, Md., has accepted the chairmanship of Technical Committee *C* on Fuel Oils.

Research Committee on Effect of Tin

Announcement is made of the appointment of Mr. J. P. Gill, Metallurgist, Vanadium-Alloy Steel Co., Latrobe, Pa., to the chairmanship of the Research Committee on the Effect of Arsenic and Tin in High-Speed Steel, succeeding in that capacity Mr. N. B. Hoffman, who has been obliged to resign because of pressure of other work. Mr. Hoffman will continue on the committee, the other members of which are: G. E. F. Lundell, J. V. Emmons, and J. H. McCadie.

The committee presented a progress report at the recent annual meeting, describing investigations to determine the effect of 0.5 per cent of tin and 0.5 per cent of arsenic present separately in two normal tungsten high-speed steels. As had been expected, the effect of this amount of these elements was found to be deleterious from practical service tests, and the committee now proposes to determine the effect of lesser amounts of these deleterious elements as an aid in fixing specification limits.

Reprint copies of the report will shortly be available.

New Members to July 31, 1929

The following 128 members were elected from April 29 to July 31, 1929, making the total membership, exclusive of student members, 4330:

Company Members (36)

American Creosote Works, Inc., S. C. Braselman
American Enka Corp., J. J. Schilthuis
Anaconda Copper Mining Co., F. C. Jaccard
Barnes-Gibson-Raymond, Inc., F. P. Zimmerli
Batavia & New York Wood Working Co., The, C. H. Honeck
Boeing Airplane Co., C. N. Monteith
Canadian Industries, Limited
Climax Molybdenum Co., J. B. Thorpe
Community Water Service Co., P. S. Wilson
Concrete Steel Co., J. F. Curley
Cowham Engineering Co., A. W. King
Duraloy Co., The, W. F. Furman
Eddystone Cement Co., E. R. Wilner
Federal-Mogul Corp., E. R. Darby
Frost Steel and Wire Co., Ltd., R. W. Doering
Harnischfeger Corp., J. R. Houston
Haskell Manufacturing Co., William H. Wharton Whitaker
Keystone Portland Cement Co., Frank Haimbach, Jr.
Kinner Airplane and Motor Corp., E. L. McCurtain
Lee Spring Co., Inc., R. L. Jahannsen
Louisiana Oil Refining Corp., B. P. Crittenden
Low Temperature Carbonisation, Ltd., W. A. Bristow
Madison-Kipp Corp., T. E. Coleman
Malleable Castings Manufacturers of Canada, J. C. Notman
National Radiator Corp., F. W. Meyer
New England Power Construction Co., H. L. H. Smith
Nutting Co. of New Jersey, Inc., H. C. Dewey Thompson
Pan American Petroleum and Transport Co., F. S. Campbell
People's Commissariat of Ways and Communications of U.S.S.R.,
B. W. Delgass

Philips & Davies, Inc., E. B. Philips
Pratt & Whitney Aircraft Co., A. V. D. Willgoos
Smith, Emery and Co., E. O. Slater
Superior Portland Cement, Inc., H. A. Ambler
Transformer Corp. of America, E. J. Doyle
Udylite Process Co., George Dubpernell
Wiggins's Sons Co., H. B., R. H. Willin

Individual and Other Members (87)

Allen, R. M. (Am. Car & Foundry Co.)
Allison, F. H., Jr. (Crucible Steel Co. of America)
Barker, S. G. (British Research Assn. for the Woollen & Worsted Industries)
Bass, F. L. (Keystone Portland Cement Co.)
Bellis, A. E. (The Bellis Heat Treating Co.)
Bennett, C. E. (Georgia Power Co.)
Berry, E. F. (Syracuse Univ.)
Blake, J. M. (Am. Manganese Steel Co.)
Blum, William (U. S. Bureau of Standards)
Bowen, W. H. (J. & P. Coats (R.I.) Inc.)
Bowlus, G. H. (General Petroleum Corp. of Calif.)
Bruce, W. C. (Am. Tripoli Co.)
Bucy, E. H. (Waukegan Chemical Co.)
Buffalo, City of, C. L. Howell
Buffalo, City of, J. T. Mockler
Carver, F. S. (Engr.)
Cathcart, P. H. (Nat. Lead Co.)
Coghlan, R. R. (Marquette Cement Mfg. Co.)
Crocker, D. A. (The Gummed Industries Assn.)
Croft, H. P. (Chase Co's., Inc.)
Davitt, J. W. (New Jersey Asphalt & Paving Co., Inc.)
Dowdell, R. L. (U. S. Bureau of Standards)
Epstein, Samuel (U. S. Bureau of Standards)
Felbeck, G. T. (Carbide & Carbon Chemical Corp.)
Fleming, E. P. (Am. Smelting & Refining Co.)
Foote, O. A., Jr. (Venango Mfg. Co.)
Foster, Alexander, Jr. (Warner Co.)
Frauenfelder, Herman (Algonite Stone Mfg. Co.)
Freyn, H. J. (Freyn Eng. Co.)
Galhuly, S. W. (Structural Clay Tile Assn.)
Geib, W. S. (Southern Testing Labs., Inc.)
Gibson, W. A. (Pietanny Arsenal)
Goodwin, W. N., Jr. (Weston Electrical Instrument Corp.)
Grant, A. A. (Consulting Engr.)
Grunewald, M. E. (Coplay Cement Mfg. Co.)
Hansen, H. F. (Nat. Commercial Title & Mortgage Guaranty Co.)
Harnsberger, A. E. (The Pure Oil Co.)
Harrison, W. F. (The California Ink Co., Inc.)
Heilbronner, L. C. (Cia. Braseleira de Cimento Portland)
Hiers, G. O. (Nat. Lead Co.)
Hilton, A. F. (Farrel Birmingham Co., Inc.)
Holden, T. N., Jr. (E. W. Bliss Co.)
Holt, W. F. (Bethlehem Steel Export Corp.)
Hooper, J. L. (Pacific Mills, Ltd.)
Hunt, H. L. (Norfolk Testing Labs., Inc.)

Huntoon, J. S. (Michigan Central R. R.)
Jongkind, W. (Norco Refinery, Shell Petroleum Corp.)
Kaltenbach, R. W. (R. W. Kaltenbach Corp.)
Ley, H. L. (Steinite Mfg. Co.)
Lichtenberg, Charles (Commercial Solvents Corp.)
Linn, H. F. (La Tolteca, Compania de Cemento Portland, S. A.)
Loosen, Bernard (Am. Bemberg Corp.)
Massee, O. J., Jr. (Bibb Brick Co.)
Meriwether, C. E., Jr. (Am. Turpentine & Tar Co.)
Miller, R. P. (Consolidated Steel Corp.)
Myren, B. J. (N. P. Severin Co.)
Neibling, T. M. (Dixie Culvert & Metal Co.)
Nettleton, E. T. (The Connecticut Quarries Co., Inc.)
Olson, H. O. (Franklin Limestone Co.)
Pellerano, Silvio (Garfield Mfg. Co.)
Peterson, R. E. (Westinghouse Elec. & Mfg. Co.)
Pickering, G. F. (Adolph Hess & Bro., Ltd.)
Pilling, J. W. (The Baltimore Brass Co.)
Scheer, Serge (Civil Engr.)
Schuessler, H. O. (Apollo Metal Works)
Smillie, Ralph (City of Newark Transit Bureau)
Spowers, W. H., Jr. (Consultant on Galvanizing)
Squier, G. C. (North Am. Coal Corp.)
Squires, John (Kreider-Reisner Aircraft Co., Inc.)
Steinmeyer, J. W. (Am. Car & Fdy. Co.)
Svenska Teknologforeningen (The Swedish Assn. of Engineers & Architects), R. Naucier
Tayler, T. C. (Sand Lime Products Co.)
Timby, T. G. (McKeesport Tin Plate Co.)
Torres, A. F. (Polytechnic School, Sao Paulo, Brazil)
Tuttle, J. B. (Woburn Degreasing Co.)
Urlaub, George A. (Tubize Artificial Silk Co. of America)
Volp, J. G. (Allied Oil Co.)
Von Winkle, W. M. (Stone & Webster Engineering Corp.)
Vredenburgh, Watson (Hildreth & Co., Inc.)
Wagner, L. A. (U. S. Bureau of Standards)
Whitney, C. S. (Consulting Engr.)
Wise, W. F. (Southwest Stone Co.)
Withrow, J. R. (Ohio State Univ.)
Wormser, F. E. (Lead Industries Assn.)
Wysor, Henry (Bethlehem Steel Co., Inc.)
Yaxley, J. W. (Drummondville Cotton Co., Ltd.)
Young, C. H. (Robbins, Young Co.)

Junior Members (5)

Berry, H. R. (Arkansas City Refinery, Shell Petroleum Corp.)
Cree, M. B. (Georgia Pine Turpentine Co.)
Meinholtz, E. C. (Missouri Pacific R. R. Co.)
Wheeler, R. E. (Halcomb Steel Co.)
Winning, W. C. (Standard Oil Development Co.)

Personals

A. A. STEVENSON, Past-President and Honorary Member of the Society, retired on July 1 from the Vice-Presidency of the Standard Steel Works Co. after forty-one years of continuous service with the company. After two years spent at the University of Illinois he held positions with the Southwark Foundry and Machine Co. and the Cambria Steel Co., and on August 1, 1888, went with the Standard Steel Works as traveling engineer. He held various positions with the company, becoming Superintendent in 1903 and Vice-President in 1908. At the time of his retirement he was Vice-President in charge of manufacture.

Mr. Stevenson will continue to carry on many of the technical activities in which he has been engaged in recent years. His retirement from active business will enable him to devote still more time to the activities of the American Standards Association, of which he is a Past-Chairman and where he has so ably represented our Society.

H. W. GILLET, Chief of the Division of Metallurgy of the United States Bureau of Standards, Washington, D. C., has accepted the post of director of the Battelle Memorial Institute, Columbus, Ohio.

SAM TOUR, formerly metallurgist for the Doehler Die Casting Corporation and later engaged in general metallurgical consulting work, has merged his business with that of Lucius Pitkin, Inc. Mr. Tour has been elected a vice-president and a director of the company and has taken charge of the branch office at Batavia, N. Y.

HENRY S. RAWDON has been appointed chief of the Division of Metallurgy at the U. S. Bureau of Standards. Mr. Rawdon was one of the first members of the division when it was started as a separate metallurgical unit sixteen years ago, and has been in charge of the metallographic, X-ray and corrosion work of the division since that time.

P. E. MCKINNEY, formerly metallurgical engineer at the U. S. Naval Gun Factory, Washington, is now associated with the Bethlehem Steel Co., as metallurgical engineer at Bethlehem, Pa.

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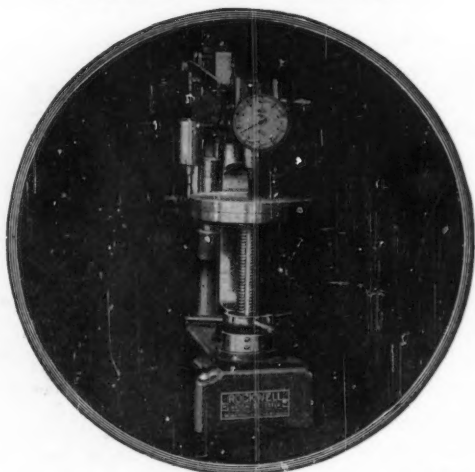
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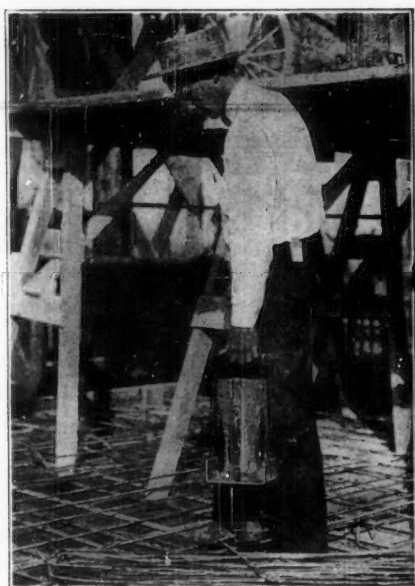
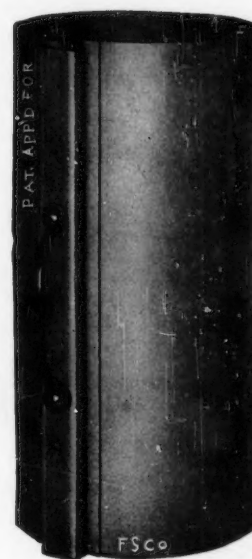
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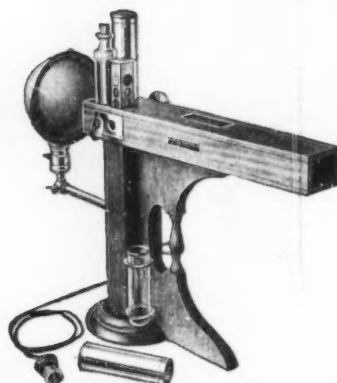
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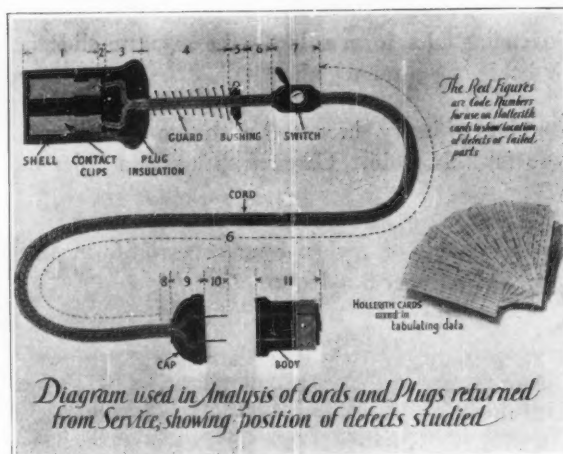
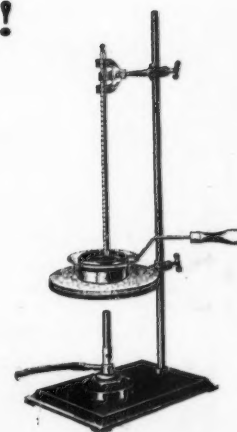


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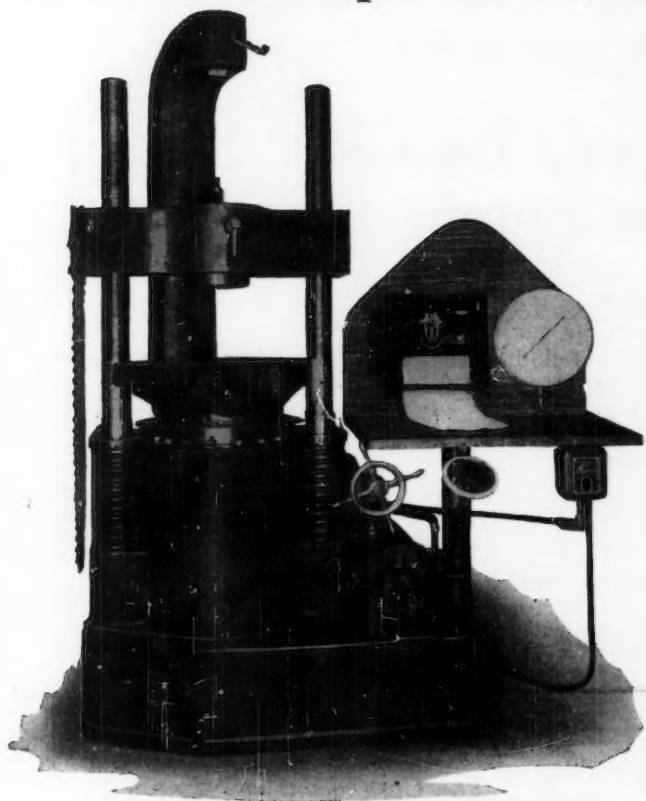
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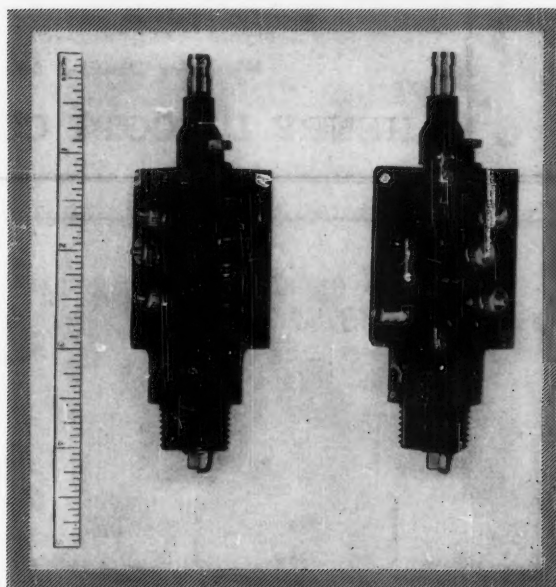
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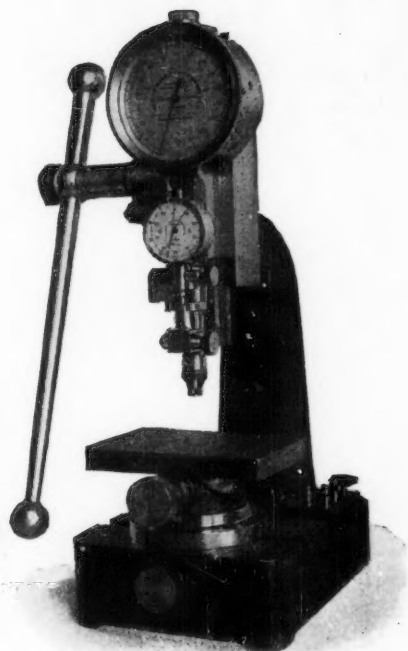
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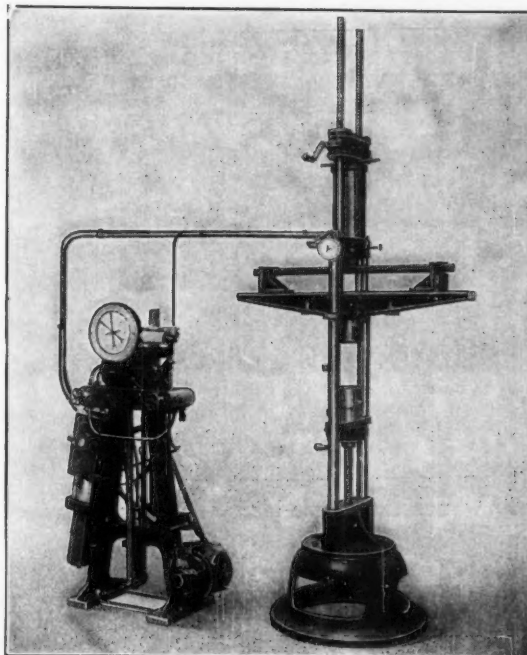
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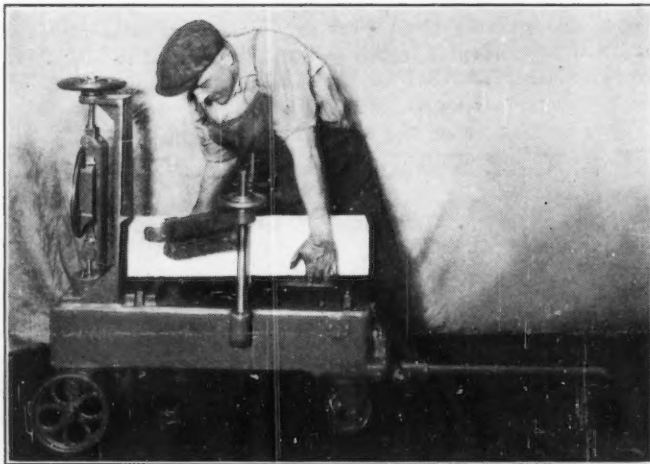
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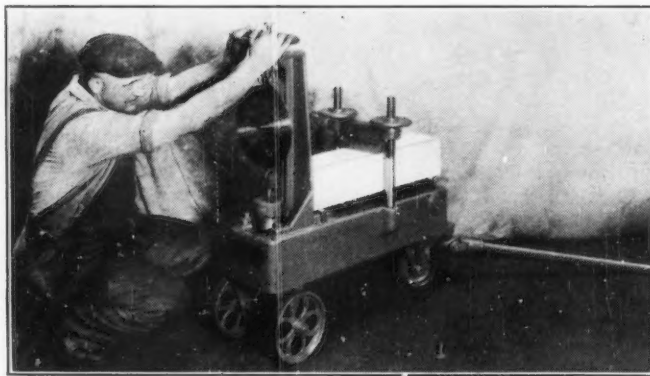


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